ABSTRACT:

Purpose – This paper seeks to provide an in-depth discussion on the impact of agricultural biotechnology in developing and least developed countries (LDCs) as well as the concomitant biosafety concerns that might have an impact on trade and the environment whilst highlighting the importance of choosing development pathways that are conducive to the specific needs of these nations without endangering the biodiversity and affecting people's health.

Design/methodology/approach – The paper adopts a socio-legal approach by undertaking a content analysis of decided cases, relevant treaties and existing studies conducted in areas related to agricultural biotechnology within the framework of sustainable development imperatives.

Findings – The paper suggests that developing countries venturing into agricultural biotechnology need to enrich the technology according to their needs and capabilities in order to be able to weigh the benefits against the risks in the production and import of genetically modified organisms (GMOs) specifically via the implementation of the “precautionary principle” and viable “risk assessment” techniques which conform to their existing international law obligations in view of the findings that most of these nations have not formulated adequate legal and institutional frameworks supported with the necessary expertise to regulate, monitor, and ensure safety of agricultural GMOs produced and/or imported by them.

Practical implications – The issues and suggestions in this paper will enable the development process of developing and least developed economies to conform to the tenets of sustainable development and minimize the loss of Earth's biodiversity.

Originality/value – The paper is of practical use to stakeholders and policymakers alike venturing into agricultural biotechnology. It pools the findings of a cross-section of studies to look at the implications therein and the arising biosafety and trade issues with special reference to developing and LDCs.